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THE AMERICAN ARCHAEOLOGIST.

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COMPARATIVE AMERICAN CIVILIZATION.

BY HUBERT HOWE BANCROFT.

To arrive at an approximate idea of the social condition of the several tribes inhabiting America at the time of its discovery by Columbus, we have simply to compare these tribal characteristics one with another, and with European and Asiatic civilization.

As to the question of races or species in America, ethnologists seem well enough agreed to call the American Indians all one people, however diversified in culture, traits, and languages,—all save the Eskimos, who circle around the north pole, and belong as much to one continent as to another. That is to say, however American tribes and nations may differ from each other, they differ yet more from all the rest of the world, and have many of their own peculiar resemblances in common. Nor does it seem profitable to spend further time in attempting to prove what can never be known until every Whence and Whither are made clear to man—the origin of the American Indian.

The first question the Spaniards asked themselves on landing, was: By what route came these people hither from the general Babylonian break up? And the next: Have they souls? The latter was the more important, and must of necessity be decided in the affirmative, else the Church were without occupation in this vast domain, and the pretty native girls obviously could not serve as mistresses to the pious cavaliers. Thus the question of soul was decided, and, if any one can tell what soul is, we have that as a starting point; in this respect the Americans are placed in the same category as the Europeans. Next, as to intellect. It would be difficult to prove that the native American intellect was inferior to that of the European or Asiatic; that there were not scattered throughout the wilderness here and there a Plato, a Shakespeare or a Christ. Among the Mexicans and Peruvians were poets, philosophers and statesmen of no mean order. Within the present century we have one example, at least, of a pure-blooded Aztec boy, who could not even speak the Spanish language, when at the age of twelve years, to escape punishment by an uncle for neglect of task imposed, he followed a cattle-drover from the mountains into the city of Oajaca, where a Catholic priest took him up to educate for the Church; the young man emancipating first himself, and then all Mexico from intellectual thraldom. As true greatness may be measured,—nobleness of heart united with mental and

moral supremacy,—there never lived a greater or a better man, or one who accomplished more grand and wonderful things, and from the purest and most unselfish of motives, than this full-blooded American Indian, Benito Juarez.

His achievements were more intricate and more important than those of any Washington or Bolivar, of any Napoleon or Alexander. While yet his mind was being trained to accept the dogmas and obey the mandates of the Church, he saw in that Church an overwhelming religious despotism, holding in its hands three-fourths of all the property in the country, swaying politics and society, mind and morals, the material and intellectual, at will. He saw the nation broken into scores of petty revolutions, and the roads infested with banditti. Then came the Frenchmen with their Austrian prince, thinking to plant imperialism in America while the United States were engaged in deadly strife for the preservation of their own integrity. As lawyer, judge, state governor, and finally as president of the republic, Juarez emancipated Mexico from the power of the Church, put down to a great extent revolution, and centralized the strength of the republic, and finally drove out the foreign invaders, thus leaving the country at his death all well prepared for the prosperous and benignant regime under Porfirio Diaz.

Hundreds of examples could be cited, as Pontiac, Red Jacket, Techotlalatzin, and Manco Capac, showing the brain power of American aborigines. As to physique, the difference, if any, is not worth discussing. So with morality and religion; those of the old world were as bad as they could be, therefore those of the new world could be no worse. The Americans sacrificed human beings to their gods of wood and stone; the Europeans sacrificed human beings to their lust and avarice. For every heart torn from an innocent breast and thrown to Huitzilopochtli, a hundred innocent human beings were butchered in the name of Christ. Little to choose between them on the score of humanity and superstition!

Hence we may say that as between Americans and Europeans, in body, soul, intellect, morality and religion, there was practically no difference.

For the state of culture in America as compared with the culture in Europe we must look therefore alone to science, art and literature; to the inventions, contrivances and paraphernalia of civilization; and there was less difference in all these than may be supposed. I am speaking of the more advanced nations of America, of course, of the Iroquois, or nobler type of the American Indian proper; of the Nahuas and Mayas of Mexico and Central America, and the Peruvians of South America, and not of the lower orders of humanity occupying the arid inland regions of North America; or the malarious seaboards of the tropics, or the wind-whipped regions of the southern horn.

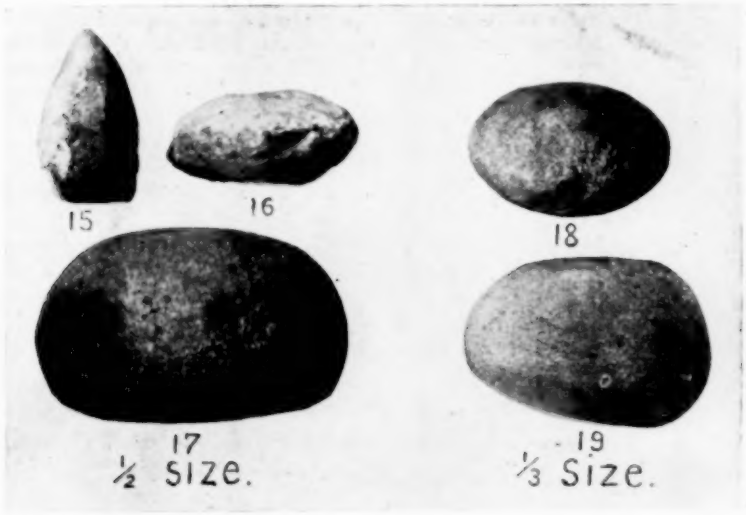
The civilized nations of America had their systems of ethics, of jurisprudence, of government, as well as their literature, arts, science, commerce and manufactures; but, as a rule, they were all inferior to those of Europe. The first great drawback with the Americans was their ignorance of the use of iron; next gun powder and printing, which last two indeed had then not been long in use in Europe. Iron is a great civilizer; it was nowhere used in North or South America. Copper was known, and the gold and feather work of the Americans was superior to anything of the kind in Europe. In the way of domestic animals the Americans were lamentably deficient, women being their beasts of burden. The Peruvians had their llama, and in some parts there were bisons and other tamed beasts; but as a rule it may be said that the Americans had neither iron nor domestic animals, and that herein lay the cause of the chief differences between the civilizations of Europe and America.

PREHISTORIC REMAINS OF THE TUNXIS VALLEY.

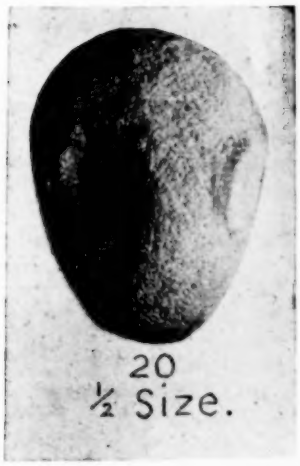
BY FREDERICK H. WILLIAMS, M. D.

HAMMER AND PIT STONES.

Yet in consequence of this very close connection with nature, whatever he met with became a possible agent in his struggles with her for existence, and not having differentiated his arts, each tool may have had an hundred useful possibilities. Necessity is no more the mother of invention in tools than she is



HAMMER STONES.



A PIT STONE WITH THREE "PITS."
(One opposite the two shown.)

of variety in their uses. It must not then be expected that our names of his many implements, however useful to our study, always convey the Indian's conception of them. The simplest of all implements is the hammer stone. Wherever a brook rolled over the gravel beds, the Indian found it ready smoothed and shaped for his hand. On all his old camping grounds they may be collected in every sort of condition, from the plain stone showing no marks of usage, through various stages of elaborate working, down to those that have been pounded nearly to pieces. Wherever we find the spalls or cores of the arrow maker, we find the little "knockers" with which he worked his quartz or cherty pebbles; Figs. 15, 16. In this locality the more common hammers are made of a hard quartz and quartzite. Some of these have been carefully pecked all around their edges and brought into a round (Fig. 17), or oval shape, (Fig. 18), a much used hammer. Many are beautiful objects; Fig. 19. Others are made of a coarse but

compact yellow quartzite and red sandstone. Irregular nodular stones of agatized material and quartz seem to have been prized for their great density and resistance to fracture.

Many of the objects in yellow sandstone, red sandstone and even compact quartzite are found with one or more little circular depressions or "pits". These pits are conical and usually about one-quarter to one-half of an inch deep.

Fig. 20 shows a rudely egg-shaped hammer of coarse red sandstone, in which the ingenious Indian, in addition to deep pits for thumb and middle finger, has made a third on the top of the stone for the index finger. This arrangement gives a firm hold. More commonly there is a pit upon the two flat faces of the hammer, opposite to each other. Sometimes there is only one pit, and again a stone may have five or six more pits irregularly placed. Figure 21 shows a beautiful red sandstone that has the indescribable polish of long handling, with one pit on its long face and the other on its smaller end. These stones are found all over the world and are usually called hammers. The writer thinks many of them show no signs of having been used upon other stones. Simple as they are they possess a sort of beauty which endears them to their possessor. Fig. 22 is a one pit stone or "anvil." Figs. 23, 24, are two pit stones or "hammers."

PIT STONES.

It is conceivable that these simplest of tools, as the Indian came to comprehend their possibilities, worked as great a change in separating him from his ferine associates as the discovery of iron and steam worked in advancing mankind from the stone age conditions. From striking them together he may have gained his first conceptions of producing fire at his own pleasure. By striking them together he slowly discovered the different qualities of stones, the possibilities of the conchoidal fracture became manifest to him. From them he gradually evolved the whole art of chipping and pecking in stone. No thoughtful student can view these objects without emotion: their prototypes were the cornerstones of the portals of civilization; their discovery was the "open sesame" to those inventions to which man owes his present physical ameliorations. Whether it were apes or men that splintered the miocene flints of Thenay,* we can not doubt that when primitive man began to strike these stones together with a conscious purpose, he struck the blow that will be the ultimate death knell of all his savage animal associates, against which, unarmed, he waged an endless conflict.

* The Abbe Bourgeois showed split flints from the miocene at Brussels, in 1873.

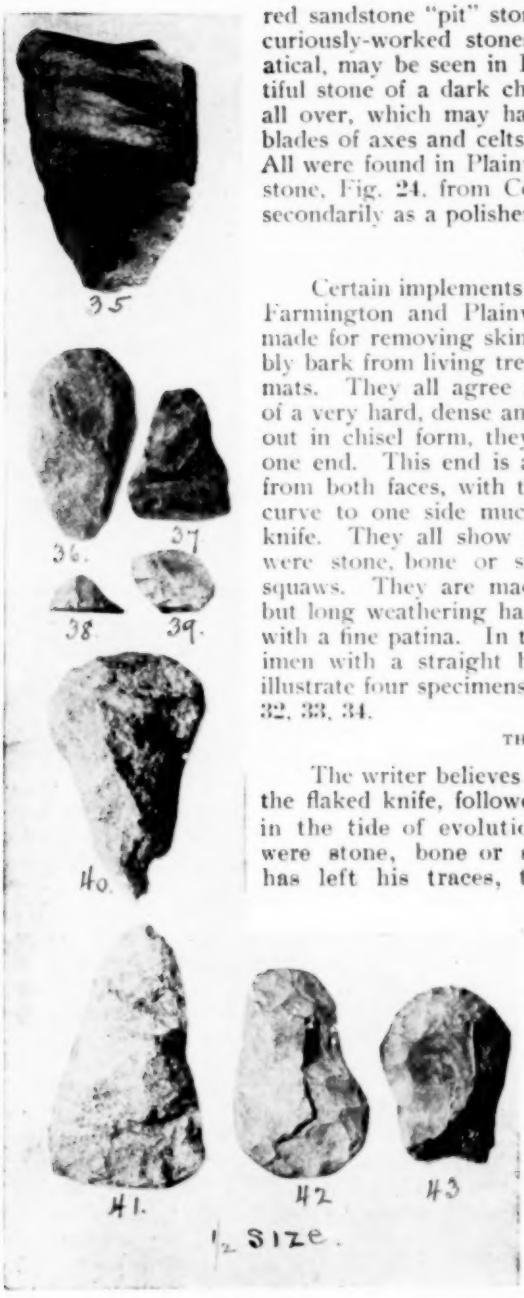
POLISHERS.

The stone age artisan had three general modes of fabricating his tools and ornaments. Having discovered a stone suitable for his purpose, often one having a natural shape somewhat similar to the object desired, a few well-directed blows with his hammer would roughly complete its outlines. Now he might slowly reduce it to shape by light and repeated blows of his hammer, wearing it away in coarse dust. This was pecking, traces of which show upon nearly all large objects, except those made from flint or chert. Or he might grind it into shape by rubbing it upon a hard stationary stone of gritty nature, or by

POLISHERS

FLESHERS

rubbing other gritty stones on it. This was polishing. Finally if the stones worked upon were of a proper nature to take the right cleavage, he might chip it away by direct blows from his hammer, or by sudden impulsion upon its edges with a hard object, wear it down in little flakes. This was flaking and chipping. Often several or all of these actions might be brought to bear successively upon one object. The little flakes produced by the ancient chipper are among the most distinctive of his vestiges. The eye of the practiced "relic hunter" trails their fabricator by these little spalls, much as the red man trailed the objects of his chase. By observing their variety, condition and abundance, he is often enabled to ferret out old and productive village sites. It seems probable that flaking was the earliest of all his arts in stone, and yet it ultimately reached the highest place among them. Besides the hammers described there have come down to us quite a variety of tools used in these processes. In Figs. 25, 26 and 27, one-third natural size, are shown grinders or polishers of gritty red sandstone and quartzite. Fig. 27 is a



SCRAPERS.

red sandstone "pit" stone made into a polisher. Other curiously-worked stones, whose use remains problematical, may be seen in Figs. 28, 29. Fig. 30 is a beautiful stone of a dark chocolate color, carefully polished all over, which may have been used in perfecting the blades of axes and celts. The other tools are quartzite. All were found in Plainville or Farmington. The pitted stone, Fig. 24, from Congamond Lake, has been used secondarily as a polisher.

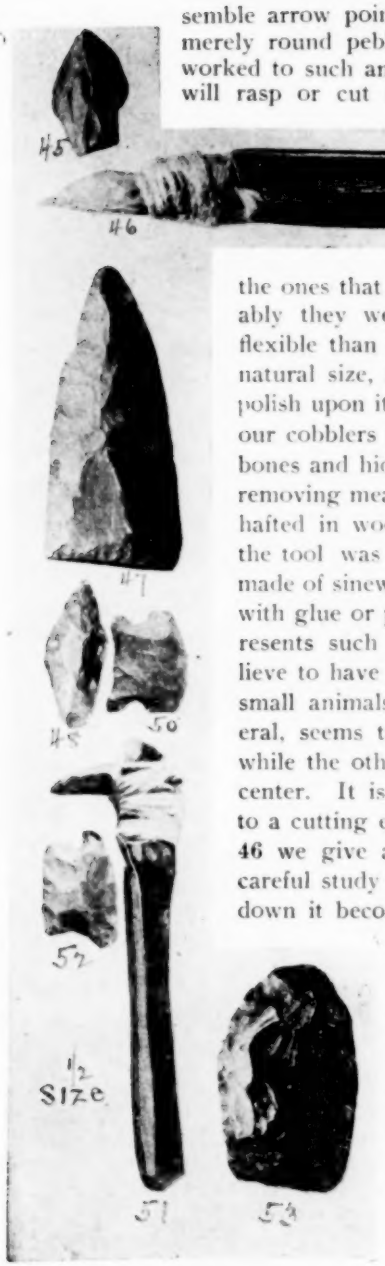
FLESHERS.

Certain implements have been sparsely found around Farmington and Plainville, which seem to have been made for removing skins from slain animals, and possibly bark from living trees, used in making basketry and mats. They all agree in being made from thin flakes of a very hard, dense and heavy stone. Roughly flaked out in chisel form, they show no fine work except on one end. This end is always brought to a sharp edge from both faces, with the cutting edge prolonged in a curve to one side much like an old-fashioned shoe knife. They all show the friction polish of long use, were stone, bone or shell, wherever prehistoric man squaws. They are made from a silicious blue stone, but long weathering has made them a dull earth color, with a fine patina. In the Bristol Museum is one specimen with a straight blade resembling a chisel. We illustrate four specimens, all from Farmington; Figs. 31, 32, 33, 34.

THE SCRAPER

The writer believes that the scraper and its brother, the flaked knife, followed next after the hammer stone in the tide of evolution. Whether his environment were stone, bone or shell, wherever prehistoric man has left his traces, these most useful of tools are found. Among such simple implements we can not be surprised that along with specimens of the highest art should linger others as rude and simple as may be found among the earliest vestiges of man. Fig. 35 represents such an object in yellow jasper from Gramb that seems the counterpart of specimens from prehistoric France. Made from various cherty or quartzite stones, some were simply more or less chipped on one edge, as in Figs. 36, 37; some re-

semble arrow points ground off to a blunt edge. Others are merely round pebbles, split through their centers and then worked to such an edge that when drawn towards one they will rasp or cut any soft material. Figs. 38, 39, are fine examples. Many of these tools show signs of very prolonged use by the exquisite polish upon their working surface, and these are not always the ones that we would select for shape or beauty. Probably they were more used to soften skins and rub them flexible than for cutting; Figs. 40, 41. Fig. 42, one-half natural size, represents an uncommon form with unusual polish upon it. A great many seem to have been used, as our cobblers use a piece of glass, for rasping wood, horn, bones and hides, and doubtless also in preparing food and removing meat from bones; Fig. 43. Some were doubtless hafted in wooden handles; the handles being split open, the tool was partly inserted and seized on with threads made of sinews and vegetable fibres, and perhaps cemented with glue or pitch. Fig. 45 (c), one-half natural size, represents such a scraper from Southington, which we believe to have been also a skinning tool, and admirable for small animals. This form, of which we have seen several, seems to be undescribed. One face is always flat while the other is raised into a triangular ridge along its center. It is stemmed like an arrow point and brought to a cutting edge all around; length 1 1-4 inches. In Fig. 46 we give an ideal reconstruction of this tool. Upon careful study it will be seen that when it is used flat side down it becomes a lancet; with its curved back down it acts as a wedge or probe in separating the tissues or raising up the skin. When pushed along, arrow-shape, either edge becomes a good cutting knife, acting like one blade of a pair of shears. When held with the flat face towards one it makes a serviceable knife. In skillful hands it could easily be used to extract arrow points from wounds. These tools are far from numerous. Fig. 47 shows a much larger one, with the back much less ridged, from Wolcott, which shows the polish of very great use.



SCRAPERS.

Fig. 48 gives another specimen. Fig. 50 gives a typical scraper fit for working both wood and hides, whose reconstruction has been attempted in Fig. 51. Other forms of scrapers are shown in Figs. 52 and 53.

BUNTS.

Something like the last described scraper, only not having the edges sharp or bevelled, but always blunt are many pointless arrow heads. They are thought to have been used to kill small game without breaking the skin. "Jones says that crescent-shaped arrows were used by the southern Indians for shooting off birds' heads." * We show several examples of these so-called bunts

BUNTS

or bunters; Figs. 54, 55, 56. Figs. 57, 58, are the arrow points presumably used for shooting off birds' heads. Fig. 59 represents a chisel-shaped quartz arrow point from Compounce, with very sharp edge, which is of great interest. Fig. 60, an argillite specimen from Farmington.

PERFORATORS.

Next in frequency to arrow and spear points upon our old village sites, we find perforators or drills. The Indian made two general types of perforations in stone. When he wished to bore thick objects as pipes or banner stones and beads, he made a cylindrical bore, usually of the same diameter, all through the object. These bores are thought to have been made with hollow horns or cane and reed stems, with the aid of sharp sand. Concentric rings may be seen in many such perforations. Again, unfinished objects often have incomplete perforations whose condition shows that the drill was a solid tool. Many pipes seem to have been gouged out, but by what tool we cannot say. The most common form of perforation, however, is a conical bore, which usually is made from both sides of the stone being worked. These holes meet at an angle about the center of the stone, and the opening is usually near one side of the perforation, showing that the drill was worked in obliquely from each side. In more carefully-finished objects the center of the hole is later widened so that the whole diameter is more nearly equal, but only in a few does the peculiar conical appearance of the bore disappear. Some tools show a conical bore made entirely through from one side. Some investigators have doubted the possibility of drilling hard stones with such drills as have come down to us. For many of them are of such fragile material as red sandstone, shale and slate. Dr. Abbott† pictures a sandstone object, of which he says: "By the aid of two stone drills we completed the perforation; accomplishing it after eleven

* "Fowkes Stone Art. 13th Annual Report Bureau Ethnology, p. 168.

† Stone Age in New Jersey, p. 326. Fig. 159, Smithsonian Pub., 394.

PERFORATORS.

hours of not difficult, but rather tiresome labor." Two drills were used, one of jasper and one of slate. "The latter drill is of slate and comparatively soft, but it did not wear away more rapidly than the jasper specimen." We illustrate a number of typical forms from our valley. Fig. 61, one-half natural size, is a double drill made from a moss agate. It seems almost incredible that such a tool could have been made from so hard a stone. It is one of the most beautiful objects we possess. Found in Farmington. Figs. 62, 63, 64, 65, represent drills with wide, arrow-like bases. Fig. 66 is a perforator made by rubbing. Figs. 67, 68, 69, 70, 71, 72, slender spear like tools, which were doubtless used as needles and awls as well as drills. Figs. 73, 74, represent large based perforators. Fig. 75, a small, very hard drill, resembling those from the Pacific coast. Some of these drills show the peculiar attrition polish that we noticed upon scrapers, and were doubtless used to perforate skins. They may have been hafted. Fig. 76 (c), one-half natural size, presents a drill-shaped tool that the writer believes to have been hafted and used as an awl to unravel stitches in skin robes, or possibly in fabricating baskets. It is not straight enough for a drill. Certain flaked tools of much larger size, whose edges are bevelled off sharply in opposite directions have been called reamers. When these were revolved to the left they would cut with both edges in succession, but the writer cannot understand what they were intended to cut. Fig. 77 shows a very fine example from Farmington.

PERFORATORS.

INHUMATION AND INCINERATION IN EUROPE.

BY THE MARQUIS DE NADAILLAC.[1]

All known facts show that in Europe inhumation and incineration, two such different methods of disposing of the human body, were in use at the same time among the same peoples during the age of iron, the age of bronze and, in some cases, even during the neolithic period.

The Iberians, the oldest inhabitants of Western Europe, buried their dead and punished notable criminals by the cremation of their bodies.

The Gauls burnt slaves, dependents and horses that they might follow their master into the life beyond.[2]

In the glorious days of Rome cremation was general. In the eyes of the aristocracy, however, the destruction of the human body by fire was a humiliation. By burial this aristocracy distinguished itself from the lower classes and from peoples subjected by conquest. We know that Scylla, of the illustrious Cornelia gens, was the first of his race to be cremated.

It is now generally admitted that the rapid extension of cremation was due to the Celts. We find it from Greece to England, from Etruria to Poland and Russia. Bodies were burnt and those who were not rich enough to have the entire body cremated, contented themselves with burning the head and the arms—hence partial cremation.[3]

But everywhere the two rites are side by side. Here, inhumation is the most employed; there, cremation. Why this difference among the same people, at the same epoch, in the same place of sepulture? Does it imply a diversity of origin, of caste, of social or religious condition?

The answer to this question is impossible in our present state of knowledge. Moreover, it should be different according to the country, the people, the epoch under consideration. Everywhere different influences have acted under different surroundings.

Brittany offers a striking example. The dolmen of Mt. St. Michel and the dolmen of Tumiac are but a short distance apart; both date from the neolithic period; they were built by the same race, probably during the same epoch. At St. Michel we find incineration;[4] at Tumiac, inhumation.[5]

M. du Chatelier takes us to the other extremity of Brittany. Out of 145 megaliths, dating from the stone age, he reports 20 inhumations, 72 cremations, 31 containing charcoal alone. In 22 no conclusions were possible.

We see a similar state of affairs near the town of Reims, in the Puy du Dome,* in the Marne and in a number of other of the French Departments. The rule is not universal, however. At Calvisson (Gard), for instance, we find neolithic burials embracing cremation only.†

In Scotland we are able to cite only the celebrated cairns of Caithness. In them at the same time are met with, without a clue to explain such characteristic differences, the burial at length; the skeleton flexed upon itself; and cremation.

---

[1] Translated by C. B. Moore. Reprint from the Journal of the Academy of Natural Sciences of Philadelphia, Vol. XI, Philadlephia, 1897.

[2] Caesar, De Bello Gallico, L. VI, C. XIX; L. I, C. XIV; L. VII, C. III.

[3] Handbuch der Deutschen Mythologie—d'Arbois de Jubainville, Rev. Arch, 1891, Mar.—April.

[4] R. Galles, Rapport sur les fouilles du Mont St. Michel en Carnac.

[5] L. Galles, Fouilles du tumulus de Tumiac en Arzon.

* Cartailhac, Mat. pour l'hist. de l'homme, t. IV, 1re Serie, p 267; t. XII, 2e S., p. 145.

† Ass. Scient. de France, Marseille, 1891.

In Italy results are startling. "When you find," says Baron de Duhn,[3] "the two forms of sepulture together, it is because two populations were living side by side, and the predominance of one or of the other indicates that of the population practising the prevailing rite." In Italy, inhumation was practised at first; incineration appears with bronze; next inhumation returns with the oldest Etruscans. Incontestable proofs of this have been found at Alba, at Chiusi, at Pisa and at different points in upper Italy. At Felsina, the ancient metropolis of the Etruscans, the present Bologna, burials by incineration and burials by inhumation were contemporary. A like state of affairs existed at Certosa, at Marzabotto, at Villanova. In the necropolis of Villanova inhumations predominate;[4] at the Marzabotto the two forms are of equal occurrence.[5]

Various Austrian provinces furnish indisputable evidence. At Santa Lucia; at Rosegg, in the Drave valley; at Rovische, in the Basse Carniole; at Vermo, in Styria; at Watsch; at San Margarethen; and especially at Hallstatt, which has given its name to a period whose beginning dates back 2000 years at least before our era; we constantly see the two rites in concurrent use.[6] The relationship between them varies only according to localities. At Watsch, for instance, with 200 tombs where incineration was employed, there were hardly a dozen where skeletons were found. But nothing would seem to indicate that these latter were destined for people of a lower class; while they were not protected by great slabs of stone like the others, their mortuary equipment was richer and the objects of bronze gave evidence of a higher art.[7] At Rovische researches yield at times quadrangular cases of stone, each enclosing an urn filled with the ashes of the dead, or a skeleton stretched at full length, the head to the east, with an urn at its feet, clasps on the chest, rings on the fingers. At Santa Lucia, on the left bank of the Idria, at its point of union with the Isonzo, 1200 tombs, previously unopened, were discovered. Incineration had been employed in them in by far the greater number.[1]

Investigations were begun at Hallstatt in 1846. Nowhere, according to Baron de Sacken, who for a long time directed the work, has there been observed in the same region modes of burial so diverse and in part so remarkable—the incineration of bodies, the mingling in the same tomb of bodies burnt and bodies buried—nowhere in fine has there been observed on so great a scale a mixture of types belonging more particularly to the bronze and to the iron age. According to the latest information, we learn that 993 tombs have been searched. Of these 527 show burials, 453 cremations. The funeral trappings were well preserved as a rule. There were discovered 640 objects in gold, 5574 in bronze, 593 in iron, 270 in amber, 73 in glass, 1243 in terra cotta.[2] In those tombs in which burial was practised the dead were laid out clothed in their garments.

If we look toward Germany we see similar cases. In tumuli near the lakes of Ammer and of Staffel, in upper Bavaria, which are of the latter Hallstatt period,

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[3] Remarques sur la question Etrusque, Berlin, 1890.

[4] Count Conestabile, Rev. Arch., t. XXVIII, pp. 253, 320.

[5] Count Gozzadini, Atti e Memorie di Storia dell' Emilia, nuova seria, t. VI, p. 1.

[6] Hochstetter, Die neueste Graberfunde von Watsch und S. Margarethen und der Culturkreise der Hallstatten Periode.

[7] Notably there have been found many situlæ and plates from sword belts, bearing in repousse military, religious, or civil scenes, a regular album of the persons buried. A. Bertrand, Les Celtes dans les Vallees du Po et du Danube.

[1] Hochstetter, VII Bericht der Prahistorischen Commission. Wien, 1884.

[2] Mitth. der Anthrop. Gesellschaft in Wien, 1887-8. Dr. Hærnes, Revue d'Anth. May, 1889. A. Bertrand, Rev. d'Ethn. 1883.

we find, out of 121 tombs, 44 given to incineration, 18 to inhumation, and 59 which show no trace of bones or of fire, though they contain the same mortuary deposits as the others. Later, in tombs attributed to the iron age, all the bodies are cremated.

In Hesse, Thuringia, Franconia, in the countries forming the extreme west of Germany, inhumation was the general rule during the entire stone age.[3] In Mecklemburg—an exception, no other example of which I know—men were buried, women incinerated.

In the tombs of Prussia and of the grand duchy of Posen the presence of skeletons and of urns filled with ashes proves the existence at the same time of the two methods of disposing of the dead.[4] The tumuli of eastern Prussia, notably those of Birkenhof, tell a different story. They enclose a varying number of stone cysts containing urns with incinerated bones. Each cyst was surrounded by a circle of stones, and often a larger circle of stones on end encircled several cysts. These urns, made without the use of the potter's wheel, frequently had two handles. Investigation yielded many objects in amber, but on the other hand articles of bronze, and of iron especially, were of the greatest rarity.[5]

Scandinavia shows a duplication of the points noted in the north of Germany. At divers places are remarked the simultaneous use of the burial rite and of destruction by fire.[6]

In Bosnia the gromilas, or tumuli, go back to the Hallstatt period. Cremation, however, is rare. Of 140 tumuli recently investigated, but 11 showed complete incineration, and 18, where the burning was partial. In all the others the body had been buried.[7]

Research in different portions of Russia leads to the same conclusions. Mr. Radimski has opened 530 graves in the necropolis of Jezerina. Three-fifths showed incineration; but everywhere the two rites were apparent in neighboring tombs and sometimes even in the same one. The majority of mortuary deposits belong to the epoch of la Teene, but some were of the date of Hallstatt and even of the Roman period.[8]

The results obtained by Mr. Zavinetvich in the province of Minsk, White Russia, show that inhumation predominated with increasing ratio in proportion as one approached the Dnieper.[9]

In the country formerly belonging to the Jadzvinques the presence of the two mortuary rites is noted.[10]

In all Europe we are confronted with two very different forms of sepulchral rites. We cannot tell their origin, we know only that cremation by degrees disappeared before the progress of Christianity. Complete discontinuance, however, was slow, for we have an edict of Charlemagne, of the year 789, punishing with death those who continued to burn their dead according to the pagan custom.

[3] W. Schmidt, Cong. Anth. de Paris, 1878, pp. 285-7.
[4] Kohn u. Mehlis, Materialen zur Vorgeschichte des Menschen im Ostlichen Europa.
[5] O. Tischler, Ostpreusiche Grabhugel.
[6] W. Schmidt, l. c.
[7] Fouilles des galgals prehist. de Grassinac, L'Anthropologie 1896, p 213.
[8] L'Anthropologie, 1894, pp. 472-3.
[9] Baron de Baye, Congres de Wilna, 1893.
[10] Congres de Moscou, 1892, p 223.

MORTUARY CUSTOMS OF THE PUGET SOUND INDIANS.

I have written this article on the past and present customs of burial among the Indian inhabitants of the islands of Puget Sound with a view of raising the question as to whether these customs throw any light on the subject of the condition of progress or decline of these natives. I am of the opinion that they have been in a state of decline since before their contact with the whites, and hope this subject will be taken up by those capable of discussing it thoroughly.

The present Indians inhabiting these islands—especially the San Juan group—dispose of their dead in the most labor-saving manner possible, unless they were to throw them into the sea. A convenient sand spit or shell heap is often used, wherein an excavation can be made with little toil. Or if death overtakes one of their number and no sand bank or shell heap is near at hand, a cave or cleft in the rocks is utilized, and in there the good Indian is laid to rest, with the roar of the sea and the dash of the storm wave for his requiem.

I have found nothing buried with these dead except their clothes, and perhaps bark mats in which the bodies were wrapped. Another mode of burial long since obsolete, and of which the oldest Indians now living here claim to have no knowledge—not even traditional—was to select some rocky knoll near the water's edge, where the surface rock had become more or less disintegrated by the action of the elements and could easily be removed, and there, when a body was to be disposed of, an excavation was made to the depth of twelve to eighteen inches by removing some loose rocks, in which the corpse was then laid and covered with wood, brush, etc., and then stone piled over the whole, making an oblong mound, the torch applied and the body cremated.

In these graves I generally found ashes and charred wood and bones, the larger bones not being entirely destroyed; sometimes portions of the femur and sections of the spinal column remaining. I only succeded in securing one cranium, and that one was in bad condition.

No ornaments, utensils or weapons, except one knife, was found in any of these ancient graves, and that one was crescent-shaped and made of thin slate stone, five inches long by one and one-fourth inches across the center, and, excepting the point being slightly broken, was in perfect condition. It was no doubt left there by accident instead of design.

In some of the cemeteries here the graves can be descried scattered thickly and indiscriminately around, nearly all of them having settled to the level of the surrounding surface; but occasionally one still remains a foot or more above the ground where a greater number of stones had been used, supposedly to mark the remains of the head man or chief.

The tombs, however, that have interested me most are mounds that are frequently found on the shores of these islands, usually on prominent and picturesque headlands, as if selected by one who had an eye for the beautiful and taste for the sublime. They were constructed, too, with a view to endurance, and they stand today solid and substantial, bidding defiance to time and tempests. Great forests of pine and fir have grown up around and over them, their roots piercing the crevices of the rocks, intertwining with the bones of the forgotten braves who have left no data of the times or events of their existence.

From the manner in which I found the few charred or partially burnt remains in some of these tombs, I judged that the subject of burial was placed on the ground in a sitting position, then combustibles placed around it, and then a wall of stone laid; the rocks composing the mound were placed as much as possible on the edge, and when raised to a sufficient height above the body a huge boulder was placed on the top and the combustible matter inside ignited. As the wood was consumed and the remains cremated the pile settled to the center. Many of these tombs are from four to six feet in width and two to three

feet high at the corners. I found nothing inside but ashes, charred wood, and sometimes a few of the larger bones and vertebrae, but no portions of the skulls, and nothing in the way of implements or ornaments.

The largest of these mounds that I have found is on San Juan Island, at the north end of it, overlooking Griffin's Bay. This mound is located on a headland from which the view is magnificent. The bay here stretches away ten miles to the southeast to San Juan Pass, while to the south loom up in the distance the snow-capped Olympic mountains in all their majestic grandeur. Surely the Indian who selected this site for whatever purpose it was intended was far in advance of the common "Siwash," who comes today to dig clams on the beach five hundred feet below. The mound mentioned was fifteen feet square, four feet high at the corners, which were well carried up, five feet high in the center, and stood about square with the cardinal points.

The space inside, which was very small on account of the settling inward of the pile, contained nothing but a very few ashes mixed with the soil.

On the north side of this headland, bordering a clam beach, is a shell heap and other indications of an ancient village site. Much of the shell heap has been washed away, as the sea when rough at high tide cuts away the shore line. On this beach I found a quantity of chips and refuse matter, indicating a workshop, which no doubt was, when in operation, on the shore line above the beach, but, as the shore cut away, was washed down below the water line at high tide. Of this workshop and the specimens of the stone work I picked up in the vicinity, I may write of in a future article. W. H. THACKER

Friday Harbor, Washington.

[From Hon. William H. Thacker we received by mail a few sample specimens of the fragmentary bones he mentioned in his letter published in the February number of this periodical, as having been found near the base of the old shell heap he described, situated on Lopez island, in the Vancouver Archipelago. We forwarded them to Professor Henry C. Mercer, of the Pennsylvania University for indentification, and in due time received the following courteous answer, embodying the desired information:

"The large bone, marked No. 1, too much broken for certain indentification, is possibly that of Bison Americanus. The sign of sharpening at the point shows that it has been used as a gouge or chisel implement. The breaks at both ends slightly obscure its original contour, but the handle end has also been worked down by cutting, and its sides show knife cuts, either by stone or metal blades.

The one marked No. 2 is the upper left humerus of the coyote (Canis latrans), most probably; but possibly the same bone of an aboriginal dog domesticated by the Indians, or of the European Canis Familiaris, introduced by the whites.

No. 3 is probably from the leg bone of a deer, Cariacus.

Nos. 4 and 5 are also fragments of bones from the limbs of the deer. The last three specimens have been split with stones by human beings for the purpose of extracting the marrow. No. 3 shows signs of scorching. All the specimens but No. 2 are too fragmentary for more minute indentification.

Mr. D. N. McCaddin, of the Academy of Natural Sciences, assisted me in coming to these conclusions. Hoping that they may be of service to you, I am, with kind regards. Very sincerely yours, etc,

(Dictated.) H. C. MERCER.

This effectually disposes of any lingering suspicion that the split or hacked bones recovered from that Pacific coast shell heap may have been those of human beings, and thus testifying to aboriginal practices of cannibalism.—Editor.]

DELAWARE INDIAN VILLAGE SITES—NO. 7.

About one-half mile west of the Shawnee village site of Pechequeolin, on rising ground, were a number of rock shelters which were nearly all destroyed before the writer saw them. These rock shelters or small limestone caverns had no doubt been used by ancient man for ages. They were utilized as watch-towers by the Shawnee Indians; for they overlooked a large portion of the Delaware Indian camp site and town, across the river Delaware in New Jersey.

The Shawnees, being of a treacherous nature, were rather more vigilant than their more easy and indolent, though more powerful guardians, the Delawares, or Lenni Lenapes.

Enough remains, however, to verify the account given of them by the aged owner to prove that they had been utilized by prehistoric man as lodges, or dwelling places; as marks of fire along the side walls, composed of ledges of limestone, were still visible as late as 1860. Several rude war clubs, discoidal stones and a few mortars were found in the immediate vicinity, as well as a few stemmed arrows of argillite. There were four separate exposures of limestone on a line, located on the sunny side of the hill, facing the Indian village site on the river bank. The ledges of magnesian limestone in which these small caverns existed have been mostly converted into lime for agricultural purposes, and all that now remains are small areas overgrown with stunted oaks, sycamores and brush. It is probable that at the time these caverns were occupied by primitive man, the Delaware river, or a portion of it flowed within two hundreds yards of these "lodges"[1] or rock shelters. The indications here denote that after the depositions of the post-glacial floods had ceased an island several miles in length and about three-fourths of a mile in width existed during a long period of time, dividing the waters of the river into nearly equal parts. Numerous implements of stone, such as axes, celts, paint bowls, pestles, hammer stones, etc., are found on this glacial debris. On the northern borders of these rock shelves in the ancient channel of the Delaware river must have been once an interesting freak of nature. At the present time may be seen a large cavity into which flows a good-sized stream of water. This stream, no matter how greatly swollen by rain or melting snow, is swallowed up at this spot and is seen no more. No doubt a large cavern exists here underground, the extent of which is yet unknown. When the Delaware flowed over this spot it must have formed a good sized if not formidable whirlpool, which to the untutored mind of savage man remained an unsolved problem.

Five hundred yards west of this natural curiosity are the remnants of a large-sized Indian camp site and implement manufactory or workshop. The debris extends along the small stream which empties into the sinkhole or whirlpool, a distance of fully half a mile to a marshy piece of ground from which issue several large springs and which form the source of the stream. No pottery is found here, but numerous finely finished arrows of jasper, argillite, chert, quartz and a few of chalcedony, pitted hammer stones and smooth ones of glacial gravel, also numerous smooth stones of slate and steatite have been picked up. This sub-camp lying at the extreme north end of the Shawnee town, with its numerous observation and picket camp sites, was no doubt occupied by a large force of Delaware Indian warriors who were placed here to watch their above troublesome proteges.

Nearly half a mile due west, elevated some four hundred feet above the latter sub-camp, are the remnants, implements of another observation or picket camp.

[1]In the early part of the present century a number of apple and native pear trees were growing here which, according to tradition, were planted by the Shawnee Indians. The last of the pear trees was cut down about 1860, measuring over two feet in diameter, but bearing very little fruit.

L. & C.

The camp site is admirably located, having an extended view of the Delaware river and adjacent country, also of the larger Indian camps for a distance of four or five miles. The implements thus far discovered consist of arrows, spear heads, scrapers, net sinkers, pestles and pitted hammer stones. The arrows are of argillite, stemmed and neatly made. We found also several arrows and spear-heads of white quartz[2]. Near this site are several fine springs of good water. A small stream of water issues from the ground forming the source of the Brandywine creek which at a distance of several miles south empties into the Durham creek.

The red men who were the lords of the soil at the time of the settlement along the Delaware and its tributaries were known by the general appellation of "Iroquois," a nation, or a confederacy, whose power extended from the Atlantic to the Ohio river, and from the St. Lawrence to the Potomac. A people of indomitable energy, possessing an imperishable love of liberty. Their warpaths and well trodden trails leading through dense forests ofttimes became the highway for neighboring jealous or quarrelsome tribes to spy out the hunting grounds and cornfields of the contiguous tribes and lay them waste, which created a necessity for the more peaceful tribes to be wary; hence the necessity of the numerous picket or observation camp sites in this vicinity. An historic and well trodden Indian trail led by this finely located prehistoric camp.

CHARLES LAUBACH.

Riegelsville, Pa.

PREHISTORIC RELICS FROM SAN NICOLAS ISLAND, CALIFORNIA

I enclose with this a printed catalogue of a collection of very interesting prehistoric art remains obtained last summer on San Nicolas island, where I am sure we secured the contents of an ancient aboriginal workshop. I have made archaeological investigations all over this country for many years; but have never before found so complete an outfit of the implements and ornaments of pre-Columbian man as this. I will call attention, first, to the pick-shaped tools of stone, which, in my opinion, were used chiefly to quarry stone for mortars; and perhaps for various other purposes, just as we probably would use them were we placed in condition of the primitive Indians, without the knowledge of metals. They vary in size, from one and a half to twelve inches in length, and in weight from one ounce to ten pounds; all made, of uniform shape, from very hard stone that is found in form of water-worn boulders all along the coast line near the water's edge. It is difficult to conceive how these implements were so skillfully shaped and finished with stone tools alone. At least twenty of these picks were recovered, with about as many drills and files, constituting the bulk of stone objects; but in close proximity to these were a quantity of entire abalone or "ear" shells (Haliotis Tuberculata) with many more partly wrought, and a multitude of fragments and rejects, as well as unfinished ornaments, mostly fashioned into broad hooks—which many believe to have been designed for catching fish. In my opinion they were all ornaments and worn for personal adornment in connection with strings of small shells, either polished or in their natural state. The process of making these shell hooks, we see by the many in different stages of

[2]Since writing this paper I found on this camp site a fine bow-scraper of jasper. The notch in it is an inch wide at top, tapering to half an inch. The stone is about two inches wide, one inch thick at its base and is chipped tapering, so as to form a convenient implement for scraping or polishing. A dense undergrowth of hazel and persimmon wood abounds here, preventing a closer investigation. No doubt many important and instructive relics will yet be unearthed at this spot, as we are here at the source of the historic Brandywine, along which were discovered some very important and instructive implements relating to the antiquity of man in the valley of the Delaware.

manufacturing, was as follows: The shell was first cut, or broken into a disc, then perforated in the middle by a blow with the pick; the drill was then inserted and the perforation made large and regular in size; and next, the file was used to open the ring made by the pick and drill and cut out the angle forming the required hook. The accompanying cut illustrates this manipulation; showing, first, the shell in raw state, then the disc; the hole made by the pick; this enlarged by the drill, and then the work of the files in finishing the ornament. This will give a fair exhibit of the ancient artisan's tools and products of his industry.* Besides the shell work we also found drilled objects of stone and bone; and in the same deposit, or accumulation of workshop debris, were a large quantity and variety of bone implements which, from their forms, may be named awls, knives, needles, perforators and punches. Among these are perineal bones of the male seal, some of them sharpened to a point at the smaller end, and the ribs of the dog or wolf, and some of these are obtusely pointed and creased at the end evidently for flaking stone in making arrow-points. Among these was an Alaskan knife, a sharp stone shaped like a large, broad arrow-head, set in a wooden handle and fixed in place with asphaltum. There were also a goodly number of sharp-edged flakes and chipped blades of flint and obsidian, of all sizes, that prooably had been used for cutting up seals and fish, together with at least a dozen stone rings, and more than two dozen round or oblong stones with grooves cut around them longitudinally, varying in size from one to three inches in diameter, and of unknown use.

I write in haste, but will add that I have just read, in the February number of the American Archaeologist, Mr. G. M. Sherman's paper on "So-called Drills and Perforators," and will say that I fully concur in his theory of their use.

South Pasadena, Cal HORATIO N. RUST.

[San Nicolas island is a barren patch of comparatively level rock and sand, four by eight miles in extent, eighty miles off the coast of California, southwest of Los Angeles, and is almost destitute of vegetation, and so desolate and windswept the greater part of the year as to be unfit for human habitation. The island has some fresh water, and at one time supported quite a numerous population, as is evidenced by the many implements of stone, bone, shell and wood that have been found there in the graves of their dead and on the desert surface. Among these are many objects of steatite and serpentine, minerals not found in situ on the island. The nearest known source of steatite is on Catalina island, fifty miles distant, and that of serpentine is at Piedras Blancas. The large picks mentioned in the foregoing paper were no doubt used in quarrying steatite and shaping it into cooking vessels; the smaller ones were employed in fashioning shell ornaments. The collection mentioned by Major Rust comprises several hundred specimens, including stone mortars and pestles, whale and seal teeth, steatite bowls, bone whistles, awls, needles and knives, two human skulls and one of the dog and one of the fox, stone rings, grooved balls, net-sinkers and a quantity of other rare and curious objects. We learn that the collection is offered for sale to defray expenses of the exploration expedition. Those desiring to secure such valuable art remains of an extinct people will do well to address Major Rust at once.—Editor.]

*We very much regret that the specimens sent by Major Rust, from which the illustrations he refers to would have been made, failed to reach us in time—in fact, have not yet arrived. We hope to receive them, however, in time to have them electrotyped for our next issue.—Editor.

SURVIVALS OF THE STONE AGE.

To the Editor:

Your letter of last December 24th was duly received, and I have not forgotten your request for information regarding survivals of the Stone Age among the Indians of this northwest coast. This knowledge is becoming more obscure each year, and it is strange how soon all accurate recollections of those ancient customs die out among the aborigines. Mr. Mackay, who has been on this coast for over forty years, has kindly given me some notes on this subject, which I now forward to you, with the hope that they may prove of some interest to the readers of your valuable publication.

A. W. VOWELL,
Superintendent Indian Affairs, B C.

A FEW FACTS RESPECTING THE SO-CALLED "STONE AGE," AND SOME OF THE STONE IMPLEMENTS USED BY THE INDIANS ON THE NORTHWEST COAST OF AMERICA IN EARLY DAYS:

Stone implements were made from different kinds of rocks, viz: Hammers from granitoid rocks; bits for adzes, axes, chisels and awls from serpentine and jade; arrow-heads, spear-heads and flakes or knives were fashioned from obsidian, basalt, chalcedony or hard, tough rock having a conchoidal fracture, the latter attribute being essential. Sandstone and sharp sand were used in making even surfaces on wood and on stone implements by attrition. The jade implements were cut from blocks of rock, by means of quartz crystals, into slabs of the required thickness, and were afterwards sharpened and ground into shape on sandstone, and finished with fine sand and water on a porphyry slab or with oil on a slab of silicious slate. The arrow-heads and other implements made from hard material having a conchoidal fracture were first roughly shaped by impact, made with a hard stone hammer on hard porphyry, or other hard and tough rock; the finishing was done by an implement made of deer's horn, the hardest part, that nearest the skull, being preferred; deep notches of different sizes were cut into this implement which was used after the manner of the ordinary glazier's tool to complete the shape of the article being made, and to trim its edges.

Sandstone of different degrees of hardness and fineness of grain were used with sand and water to smooth woodwork; stonework and woodwork were afterwards polished by rubbing with dog fish skin, the stems of the equisetum, and infusorial and other silicious earths, and fancy pieces of stone for ornaments were finished by rubbing with washed ochre and oil held in dressed deer skin.

Felling Trees With Stone Axes: Stone implements were only partially used in the process of felling trees; the Indians first removed a strip of bark circularly round the tree at a convenient heighth from the ground by means of wedges, the principal wedges used being the stout tines of the wapiti horn, supplemented by wooden wedges driven by stone hammers; when the wapiti horn could not be had, the hardest and toughest wood to be procured was used instead; at intervals round the tree stones were piled to the heighth of the barked circle, forming a series of platforms around the tree, the upper stones being flat and sloping inwards towards the tree. Fires were built on these platforms against the bark surface of the tree, which were small and constructed of dry pitchy wood, which burned quickly; as the wood became charred the burned parts were removed by means of stone axes and other stone implements; as the fire extended into the tree the heated stones were removed inwards, the hottest parts of the fires being always kept against the wood of the trunk. The stone axe used in the early part of the process was gradually replaced by a stone implement having a long wooden handle. With this tool in hand the Indian

went from fire to fire removing the charcoal from the tree at the back of each fire, thereby exposing fresh surfaces to be charred; the most attention was paid to the fires on the side of the tree in which direction it was intended that it should fall; when felled the tree was divided into required lengths by means of fires and stone implements. The fires were prevented from extending in a wrong direction by protecting the wood with wads of moistened clay. The shaping of blocks or lengths of wood was accomplished by means of wedges of stone, horn, and wood, and on the more elaborate parts stone chisels were used. In hollowing a tree or log for the purpose of making a canoe, fires were built at intervals of from three to four feet along the length of the log. Stones were kept heated in the fires, the charred parts of the log were removed, and fresh surfaces continually exposed to the action of the fire; these heated stones assisted materially in charring the wood which was intended to be removed; the unburned spaces between the fires were wedged off; and after hollowing the log the outside of the canoe was shaped. The surface was then finished by means of the stone adze and by burning with flambeaux or torches of pitchy wood. The vessel was then three parts filled with water, heated stones were thrown into it, and the water thus warmed, together with the steam raised, made the wood pliable and tough in which condition stretchers were applied to widen the gunwale parts, more especially at the waist, giving the vessel her permanent form; after which fixed thwarts were placed where required.

Logs for the frames of the buildings were also gotten out in the manner already described. These frames supported the walls, which consisted of boards split from large cedar logs to the thickness of about two inches and afterwards smoothed with the adze. The roofing boards were hollowed to the depth of one inch, excepting near the edges, where a ridge the full original thickness of the board was left, the roof being composed of two courses of such boards, the upper course covering the seams between the boards of the under course. They were left movable to let out the smoke as required.

I beg to submit the above facts, hoping that they may be of some service.

J. W. MACKAY, Chief Clerk Indian Office.

A. W. VOWELL, ESQ., Indian Supt. of British Columbia, Victoria, B. C.

CORRESPONDENCE.

Editor of the American Archaeologist:

As a reader of the Archaeologist, I have been interested in the several accounts of the methods employed by the Indians in making flint and obsidian arrow-heads, but I have not noticed in The Archaeologist, or in fact anywhere else, any reference to the making of the arrow shaft, which must be made just right, as the alignment of the shaft must be perfect to ensure a perfect arrow. Among the tribes of the Great Basin I have witnessed the process of manufacturing them—quite interesting, if very simple. The arrow shaft is made by the squaw. She cuts off the young growth of willows of suitable size and length, as many as she may wish—two or three dozen or more. She then first removes the bark, carrying with her this collection of embryo shafts wherever she may go. At every opportunity she has, at rest by the trail side or in camp, she engages in the straightening process. This is done by biting them. Every stick passes between her teeth again and again, until every crook, large or small, has been eliminated. By the time this elimination is completed the stick is thoroughly seasoned and as smooth and almost as hard as bone. The point is attached to the shaft by splitting the latter at the end, introducing the former in the cleft thus made, then wrapping thoroughly with animal sinew, the point becoming quite immovable when the wrapping becomes dry and shrunken.

To feather an arrow—a very necessary part of the implement—the vane is stripped from the wing feather of any large bird and is attached to the feather end in a spiral course. And thus, with the point, shaft and feather the arrow is complete.

Virginia, Ill. WILLIAM EPLER.

To The American Archaeologist:

There is a good story in connection with the alleged find of imitation pottery among a lot purchased at Charleston, Mo., in 1879, and noted under "Archaeological Frauds" in your journal of March.

"In the seventies the 'sang diggers' and 'swampers' of southeast Missouri found it more profitable to 'dig pots' at 25 and 50 cents apiece than to hunt skunk and coon skins at an equal price. The mounds and cemeteries were rifled and thousands of pots were bought by the country merchants, who parted with them 'at a long price' to rabid collectors from the north and east. It is a fact that several now well-to-do merchants of this portion of our state 'got their start' from this traffic—our museums of the east and in Europe well filled from this source. Mr. Danfoot, now one of Missouri's representative men, and who since then has prefixed 'Honorable' to his name, told me the story: 'There was then, as now, much speculation among the ignorant as to who these old pottery makers were, their lost arts; and so among the residents of Charleston at that time was a stucco worker, 'a genius,' adept in handling plasters and clays, and who took part in these arguments, but not on the impossible side; in fact, he claimed these pots, so-called works of art, were but poor examples of the ceramic art, and that 'he could make pots that were the equal of those dug from the mounds.' This assertion was derided, of course. Making no secret of his intentions, he soon turned out 'pots' that for material and workmanship were equal to the originals, and also forms that were verily 'truly and wonderfully made,' and such as gladden the hearts and eyes of collectors who are constantly on the lookout for something new. Combinations of turtles, frogs, alligators, birds and the human form and plain forms, he made and placed on exhibition for the benefit of those who ridiculed his work. No attempt was made to pass these examples as genuine, and after the novelty had worn off he presented them to Mr. Danfoot and others 'and made no more.' (The prevailing prices paid for originals would not warrant their manufacture.) Mr. D. at that time being extensively engaged in the sale of these things, placed these so-called counterfeits on the shelves among the others in his prehistoric show room. A party of Chicagoans and New Yorkers on a buying tour visited this show room and at a very stiff profit bought the outfit (without comment), lock, stock and barrel, and made arrangements to pack and ship the stuff next day. Mr. D., whose conscience troubled him a little that evening, took out and put away these counterfeits, and the buyers next morning missing them, demanded that they be returned and go with the collection, or the sale be off. Not wishing to lose a good thing, their wishes were complied with 'without comment.'"

And this is the way the so-called counterfeits of Missouri mound builders' pottery were discovered. For many years I have been familiar with every creek, bayou and mound and the people of the mound region of Missouri, and have beyond doubt seen and handled more of this ware than any others, and with the exception of the lot noted above, I can say no counterfeit pottery from that region exists.

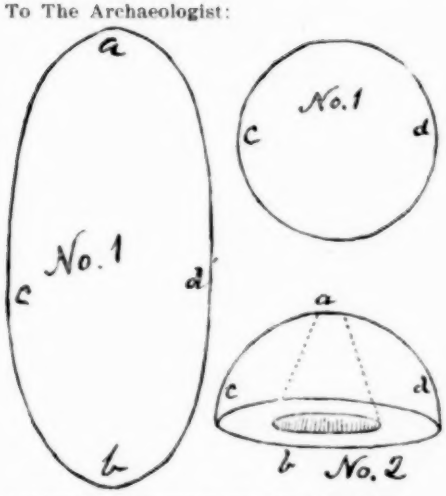
WILLIAM J. SEEVER,
St. Louis, Mo. Secretary Missouri Historical Society.

[Mr. Seever, after writing the above letter, having been reminded by the editor of the fact that imitation pottery, made in the vicinity of Cape Girardeau, Mo., was exhibited in the collection of Mr. George Mepham, in St. Louis, previous to the incident he relates, has added the following communication:]

In answer to your letter, I can reaffirm that I do not believe there ever was made any counterfeit Missouri pottery with the deliberate intention to defraud buyers or collectors. I am familiar with the history of the imitations you mention having seen them in Mr. Mepham's collection some years ago. There is—or rather, was five years ago, when I last visited him—a man in Union county, Ill., opposite to Cape Girardeau, Mo., who was operating a small pottery plant for the manufacture of earthenware vessels and fancy stoneware articles for commerce, from the clay of that locality. He made for Mr. Mepham, and also for Mr. Perrine, of Anna, Ill., a number of imitation mound pottery on models furnished by those gentlemen. He also copied, in stoneware, two human effigies found in St. Clair county, Ill., and afterward made a lot of German beer mugs, using one of those effigies for a model by cutting off the top of the figure's head and adding a handle. The work he did for these two collectors was not done to defraud, but at the suggestion and with the approval of men who should have known better; and it resulted in much harm. The collections of both Mepham and Perrine were sold after their deaths, and the spurious specimens went with the genuine, creating wrong impressions regarding the collections of honest persons. A few of the imitations of that Charleston, Mo., worker went to Cairo, Ill., and from there were broadly scattered over the country. It is well that the truth regarding these counterfeits be widely known, for the protection of the genuine specimens.

WM. J. SEEVER.

To The Archaeologist:



I enclose herewith rude drawings of two stone relics which I have in my collection, and would ask you to state through the columns of your paper their names and for what they were probably used. They are both surface finds.

The first, which I shall call No. 1, is a common field stone of fine grain and has a very smooth finish, though not glossy. It is 2 5-8 inches from a to b, and 1 1-8 inches from c to d. Part of it is of a black color, probably caused by fire.

No. 2 is a coarse-grained stone of a reddish tint, shaped like a hemisphere, with a hole through the centre, the hole being much larger on the bottom side than on the top. It is 3-4 of an inch from a to b and 1 1-4 inches from c to d. It has no polish whatever, but shows where it has been rubbed against another stone to produce the rounded form.

Trusting that I have made my description plain to you, and wishing The Archaeologist success for 1898, I remain,

WARD E. BRYAN.

Horseheads, N. Y.

["Rubbing Stones" is the vague but commonly recognized name of these implements. They are supposed to have been employed in smoothing the inside of pottery vessels before burning. When in use No. 1 was held in the potter's hand, and No. 2—this specimen probably not entirely finished—was designed to have a wooden handle thrust in the opening through it. Gentle rubbing for some time with these polished stones and a small quantity of water gave the interior of the clay vases their regular, compact and smooth surface.—Editor.]

MICHIGAN (WEXFORD CO.) ARCHAEOLOGY.

Michigan is rich in pre-historic remains for the archaeologist who is a careful explorer. Because of its great bodies of surrounding waters and its many lakes and rivers, it afforded excellent facilities for transportation by canoes, while fish and game abounded.

As the country becomes cleared up of its brush and logs, where once stood its gigantic pines, a great many relics of the pre-historic races will be unearthed. Mounds are very numerous and prove their great antiquity by the immense trees which have grown on their summits. Earthworks are occasionally met with in different parts of the country. Some time ago I visited one of the earthworks which is situated in a dense forest near Boone, Michigan. It consists originally of a double circle of earth; but from the ravages of time only portions are visible, although some sections are visible for a distance of eighty feet or more.

It is situated on the edge of a spring in which pits twenty-two feet in diameter have been excavated presumably as reservoirs for water. The diameter of the entire earthwork is 215 feet. Pine trees from four to five feet in diameter have grown on portions of the rock. May not this have been used as a fort, or station, between the copper mines of the Upper Peninsula of Michigan and the South? In August, 1897, Delmar E. Teed and myself finished excavating a large mound we had been working on at spare times for two years near Cadillac, Michigan. We rode a distance of about six miles before breakfast (got up about 3 a. m.) on our wheels, and found the remains about 5 a. m. in the shape of a skeleton lying on its right side with head to the east and the face to the north, with the knees drawn up to the level of the head and hands over the face, and the face covered by a large sea-shell disc, with an orifice in the center for the nose to protrude through. This perforated shell was about 4 1-2 inches in diameter. Back of the shoulders of the skeleton were found a few charred bones (human?). The tarsal bones were slightly charred. The skull was well preserved. Two teeth had been extracted from the lower maxillary. The bones of the skeleton were small and slender, but the skeleton was not entire. The skeleton was covered by nearly six feet of earth from the top of the mound, and was about one foot below the level of the ground.

Arrow-heads are numerous in this vicinity, and are of many rare types and show excellent workmanship. The material of which they are made is principally flint, and

occasionally of jasper and chert, which must have been brought from a distance; but a great many implements were manufactured here, since I have found the unfinished arrows in the heap of chips. Copper implements are sometimes also found here. Pottery fragments are very numerous and are generally decorated on the edges, showing many beautiful designs. CHAS. W. MANKTELOW.

Cadillac, Michigan.

American Archaeologist:

Your notes on page 83, March number, American Archaeologist, aroused my indignation. Could not the poetical glamour of Byron's Prisoner of Chillon and his time-worn footsteps in the stone pavement be left to us. It is singular the repairs should be made in time all these years until now. I am sure every contributor upon your list will be pleased to read the comments by H. N. Rust and also your article upon fraudulent implements and weapons. The unusual demand (of late years) for relics of stone, flint and pottery has so enhanced their value as to offer a large profit to unscrupulous parties to engage in their manufacture, and it is no longer a secret that regular shops have been established in which the various objects are being manufactured and surreptitiously sold to amateurs and others, some of whom are slow to acknowledge the fact. In point of quantity we find counterfeit "mound pottery" hailing from a point in southern Missouri, and also from Arkansas. There is also an extensive manufactory of pottery and pipes located in the Cumberland Valley, Tennessee. I believe there are two of these illicit dens in that region, judging from the styles of workmanship, and there are sufficient whole and genuine specimens to be obtained in all the above localities to furnish prehistoric patterns for the fraudulent output. So cunningly is this nefarious business carried on that even defects in the specimen are reproduced. Next we find red stone "pipes" (Catlinite) in endless variety of shapes. This material being easily obtained and very easily worked, is the basis of a large trade. The fantastic forms into which this stone is manipulated also assist in the manipulation of the customer. Some years ago a friend of mine brought me a present of one of these gorgeous pipes, for which he paid $10, having a tag attached, bearing the name of the Indian chief from which it was originally captured, etc. Fraudulent utensils of steatite are also numerous and well calculated to deceive. In the large number of relics brought to the Carnegie museum at Pittsburg for sale during the past two years, a great many fraudulent specimens have been detected, and it may be possible that some were accepted which almost defy detection. I have in my possession two spear points of obsidian, made by the Virginia firm you mention on page 81. These were furnished me by a middle man who, upon being told of the fraud, acknowledged the fact, but refused to give name or location. The most difficult to detect are copper implements. I have a number in my collection whose genuineness needs no corroboration. Yet such an unusual number of fraudulent copper implements have been offered for sale that I find it best to reject all specimens where an (ostensible) attempt has been made to clean and brighten or polish up, or remove corrosion. I write you more fully upon this subject because my duties in the museum in the department of ethnology (where about 12,000 specimens are on exhibition), required constant supervision to prevent the introduction of fraudulent relics. I hope some of your numerous readers may suggest a plan by which this rascality may be stopped.

Bellevue, Pa. THOS. HARPER.

Editor American Archaeologist:

My Dear Sir—Give the following attention or otherwise as you may think best:

Through default of the mails the corrections of typographical errors in my article on "Turtle Backs," in the March number of the American Archaeologist, did not receive attention. "Ruin village" should have been Rum village, and the date "1832" should have been 1822. D. R. LEEPER.

South Bend, Ind.

To the Archaeologist:

In the February number of your valuable publication, The Archaeologist, there is an item stating that George S. Younglove, of Waushara, Ohio, found a pipe, etc. It should be George S. Younglove, of Wautoma, Waushara County, Wis. If not too much trouble, please correct in next issue and oblige. GEO. S. YOUNGLOVE.

Wautoma, Wis.

EDITOR'S DEPARTMENT.

DR. J. F. SNYDER, EDITOR, - - - - - - - - Virginia, Ills.
PROF. A. F. BERLIN, ASSOCIATE, - - - - - - - - Allentown, Pa.
DR. CLARENCE LOVEBERRY, ASSOCIATE.

All communications for the Editor must be addressed to Dr. J. F. Snyder, Virginia, Cass Co., Ills.

We have before noticed the munificent donation of money by Mr. Morris K. Jessup, President of the Board of Trustees of the American Museum of Natural History, in New York, for the purpose of defraying the expenses of a series of expeditions to the far Northwest to study the native tribes of that region, and search for evidences of the primal introduction upon this continent of the American Indian from that direction. The first of these expeditions, in charge of Dr. Franz Boas, Ethnologist of the American Museum, spent last summer in British Columbia. Drs. Boas and Livingston Ferrand specially investigated the languages, characteristics, traditions and customs of the Bella Coola and Chilcotin Indians east of Queen Charlotte Sound; and Mr. Harlan I. Smith and assistants dug into the old Indian village sites and cemeteries about Kamloops and Lytton, on the Fraser and Thompson rivers, and then excavated some of the ancient shell and refuse heaps on the coast. The party secured a large amount of interesting archaeological and ethnological material for the Museum which was placed on exhibition there in February last.

The second expedition has probably by this time left New York City, again in charge of Dr. Boas, with an increased staff of scientists, who will extend their observations as far as northeastern Siberia. Besides securing accessions to the already magnificent anthropological and other natural history collections of the museum, the object of the Jessup exploring expeditions is to further study the existing tribes of natives and of their ancestors as far as possible, on both hemispheres at their points of closest approximation, with the view of discovering what affinities, if any, of language, habits of life, mythology, physical conformation and arts exist, or may have in remote times existed, between the people of each side. The difficulties in the way of recovering reliable data upon these points, at this late day, are obviously very great. If the American Indians are in fact of Mongol origin their wide differentiation from the parent stock—constituting them in every particular a distinct race—necessitates a lapse of time to have effected so complete a transformation, so vast as to have obliterated all evidences of primal unity and of early migration. Consequently, it is not to be expected that very much of importance bearing upon this intricate problem will be learned from the characteristics or languages of the people now living there, who in the course of many generations have become more or less accultured by contact with civilization and modified by tribal intermixtures. The corps of very competent and experienced scientists conducting this great work are entering a broad and little-known field where several ethnological questions of long standing may be cleared up and set at rest. Among these is the repeated assertion that "the similarity between the American Indians and the Asiatics becomes the greater the nearer we approach Behring Strait," and the common assumption of "successive waves of migration" in the past from Siberia to Alaska; and also the oftenstated identity of religion and mythology of the natives on either side of the Strait.

Without frequent intercourse between the peoples of the two continents there for ages, it is not probable that any very marked similarity of those at present residing at any distance from the Strait can be noticed. And if such remote and long-continued intercommunication did exist we would suppose that some of the indigenous products of this continent, such as corn and tobacco, and primitive stone implements peculiar to American aborigines, as the grooved stone axe

and notched flint hoe, should have found their way into Asia in exchange for mechanical arts, and the use of metals known to the Mongolians and Tartars from well-nigh the beginning of their existence. The task assumed by the able naturalists of the Jessup expeditions is to closely observe the people; carefully search the country, and thoroughly investigate all prehistoric remains that may be found in that bleak region for evidences having any bearing upon these questions. This, we are satisfied, they will do well—without bias or preconceived theories—and science will surely be much enriched by the result of their labors.

We cannot satisfactorily answer the question, so often asked by our patrons, why it is that no contributions are ever seen in our pages from writers residing in the South—by "South," meaning the Gulf States—a region of our country exceptionally rich in remains of those American aborigines who had made the farthest progress in sedentary arts of any east of the house-building Pueblos. With the phenomenal advancement of those Southern States in wealth, educational facilities, literature and learning, there seems to be there an inexplicable want, or neglect, of interest in the science of archaeology. Since the death of the profound scholar, Colonel Charles C. Jones, of Georgia, author of the invaluable treatise on "Antiquities of the Southern Indians," who stood in the first ranks of American archaeologists, but few, if any, in all that territory—so far as the public knows—devote any time or attention to the study of our prehistoric people, or to the numerous and valuable antiquities of their locality. We are occasionally favored with fine descriptions of rare and curious Indian relics found in the Cotton States, but they are invariably written by citizens residing farther north who were temporary visitors there. About all we know of the many great mounds in Florida, and the surprising history of its ancient inhabitants revealed by explorations of those immense artificial heaps of sand and shells, has been imparted to us by Professor Wyman, of Cambridge, and Mr. Clarence B. Moore, of Philadelphia, who conducted their systematic labors there as if in a distant foreign country.

These statements are not made in a spirit of disparagement, but regret that the intellectual progress of our southern neighbors is apparently so confined to channels of material industries and enterprises as to practically ignore consideration of a science of the highest importance, though of no immediate commercial value.

The initial paper of this number on Comparative American Civilization was written specially for this magazine by the distinguished historian of the Pacific States, Mr. Hubert Howe Bancroft. It must command earnest consideration, not only because of the literary eminence of its author, but because also of its positive optimistic estimate of the American Indian. Mr. Bancroft's broad and rather novel generalizations in defense of a race almost universally regarded as degraded and retrogressive, the facts he has here cited (though possibly exceptional) that cannot be controverted, and their terse application to his argument, will arrest the thoughtful attention of every reader versed in history and interested in anthropology. There are but few persons of the present time who have more profoundly investigated the native American race than Mr. Bancroft, or whose opinions on all questions concerning the Indian's history, capacity, mentality and other characteristics, are entitled to greater weight than his. This subject, that he has at present but briefly reviewed, is practically limitless and admits of almost endless discussion yet, is one that cannot be too thoroughly examined, and we hope that he may find it convenient to favor our readers with further expressions of his views and conclusions, that, though all may not concur in, all will highly value and respect.

NOTES.

The west wing of the American Museum of Natural History, which is now being completed, and for which about five hundred thousand dollars was appropriated by the City of New York, is now beginning to be occupied by the Department of Anthropology. The offices of the curators, etc., are on the top floor. Below that Mexican antiquities. The gallery is devoted to South American antiquities, Peruvian mummies, etc. The main floor is to be occupied by North American archaeology, including collections from the mounds and cliff dwellings. The ground floor is devoted to the ethnology of Africa and the South Sea islands, whilst the basement floor contains the work-rooms of the preparators.

The members of the Museum secure the specimens, the city furnishing funds for the building and the maintaining and caring for the specimens.

On a year's notice the Museum may withdraw its collections from the building which the city provides in Central Park, or the city may have the building vacated, but as the members of the Museum are prominent men of New York City such action by either party would be against its own interests, and will never be taken. H. I. S.

An explorer of Floridan mounds, recently, while engaged in investigating one on an arm of land situated between a bend of the St. John's river and Lake Beresford, unearthed a large number of very interesting prehistoric objects. He writes of them in "Our Animal Friends": "This mound, surrounded on all sides by great oaks and palmettos, I completely demolished, finding many objects of interest, including a menagerie. The animals lay but a few inches from the surface, scattered throughout an oblong space about six feet broad and twenty-five feet in length. Beneath them lay a number of skeletons. With the animal effigies were seventy-five small vessels of curious design; many effigies of vegetables, including acorns and an ear of corn, and numerous unidentified objects, making a grand total of two hundred and ninety-two, exclusive of many fragments of effigies and an immense number of bits of earthenware.

No less than forty-eight animal effigies, varying from two to seven inches in length were recovered almost entire. Among these were ten turtles and eight fish of different varieties, including, according to the late Professor Cope, the soapfish and other ocean fish. Among the turtles the snapper and the loggerhead were distinctly recognizable.

Then there were figurines, probably representing bears, panthers, wildcats, otters, two squirrels sitting on their hind legs and eating, a beaver, a dog, a wild turkey, and many other animals which experts have been unable to identify. The alligator was fragmentarily represented by a pair of jaws.

But the most interesting feature of the discovery of these animal effigies remains to be told. Among them was the representation of an animal with a long snout, resembling a tapir, but inasmuch as it was not then believed that the Indian and the tapir had existed at the same period within the limits of the United States, experts who examined the animals gave up the attempt to identify this particular effigy. But since that time Mr. Mercer, while exploring Southern caves, found in a cave in Tennessee bones of the tapir mingled with Indian remains, so that it is very likely that the Indian who modeled the effigy had seen the tapir in life.

When the Indians of later times ceded much of the coast territory to Governor Oglethorpe they reserved to their own use the islands of Sapelo, St. Catherine's and Ossabaw.

On Ossabaw island were many mounds, and among these one containing numerous skeletons, deposits of calcined human bones, and certain large jars, some containing cremated remains, others skeletons of infants.

Buried here and there throughout the mound, in little graves by themselves, were entire skeletons of over one dozen dogs. None of these skeletons were in fragments, nor were there any separate canine bones, as though the dogs had been cooked and eaten and the bones thrown into the mound while it was building. And the fact that the dogs were by themselves, and not near human skeletons, would indicate that these dogs had not been killed at the death of their masters for burial with them to accompany them to the "happy hunting grounds."

The only likely explanation for the facts as I have stated them would seem to be that the Indians of Ossabaw and of other sea islands, where skeletons of dogs were present in the mounds, loved their animal friends and when they died gave to them the same burial rites as were accorded to human beings.

It has long been an open question whether or not prehistoric Indians in this country had a domestic dog (canis), or whether their four-footed companions were descendants of coyotes or wolves, and this question is all the more difficult to decide because the jaws of some domestic dogs do not differ from those of the wolf. It is now believed, however, that the Indians had a dog in type somewhat resembling the collie, but with broader jaws, and this conclusion has been arrived at after a comparative study by ex-

perts embracing prehistoric canine remains from Florida, from Georgia, from New York, from the famous ashpits of Madisonville, Ohio, from the shell heaps of Maine, and from the Pueblos. They have been compared with the remains of domestic dogs from the mummy pits of Egypt, the lake dwellings of Switzerland, and the cemeteries of Peru, with the result already stated.

New York state has produced another stone god or idol of giant size. This time he came not from a grave, but was produced from the earth's bowels. Hid away in the depths of a cavern, the poor idol when found was broken into two, and the lower extremities were fast crumbling into dust. He was ten feet tall and, it is said, his face shows a strange peculiarity, laughing on one side and crying on the other.

I think the face of the Cardiff giant, which I once saw, and which also came from Western New York, was a very sedate one. Now, why the makers of this idol should have put upon it such a curious countenance is a mystery. Are there perhaps not living in the vicinity giant makers who could tell if they were so inclined? Makers of frauds are still at work it seems.

Probably the oldest copybook for home lessons in arithmetic was recently unearthed in Egypt. The papyrus, which was found in excellent condition, dates from the period about 1700 B. C., that is about 100 years before the time of Moses, or almost 3600 years ago. It proves that the Egyptians had a thorough knowledge of elementary mathematics almost to the extent of our own. The papyrus has a long heading, "Directions how to attain the knowledge of all dark things, etc." Numerous examples show that their principal operations with entire units and fractions were made by means of addition and multiplication. Subtractions and divisions were not known in their present form, but correct results were obtained nevertheless. Equations are also found in the papyrus, among the examples given being this one: Ten measures of barley are to be divided among ten persons, in such a manner that each subsequent person receives one-eighth of a measure less than the one before him. Another example given is: "There are 7 men; each one has seven cats, each cat has eaten 7 mice, each mouse has eaten 7 grains of barley. Each grain of barley would, if cultivated, have lasted seven measures of barley. How much barley has been lost in that way?" The papyrus also contains calculations of area, the calculations of the area of a circle and its transformation into a square, and finally, calculations of the cubic measurements of pyramids. A. F. B.

The Washington, (D. C.) Post says: "Probably the most popular instructive, though, perhaps, not most trustworthy, of the lectures of Wendell Phillips, was that on the 'Lost Arts.' He claimed pretty much everything in sight for the ancient peoples. He drew comparisons that were not flattering to the conceited people of the present. He asserted that nearly every subject that puzzles us today was discussed to rags centuries ago, and that in the arts the ancients had many devices that are beyond our reach. It is only in recent times, however, that there has been proof of an advanced social condition nearly seventy centuries ago. The rich earth of the East has yielded up many of its long-buried treasures, and from the lettered tablets found near Babylon, and more recent discoveries at Negadah, Abydos and Toukh, near the first cataract of the Nile, we learn of a people distinct from those of the first dynasty, whose art was well advanced.

"A few weeks ago there was published an account of these researches, and now there are additional particulars as to the state of civilization of the Egyptians of 5004 B. C. It was stated that at Abydos the French Egyptologist, Amelineau, had found the head of Osiris, who had been regarded as rather mythical; and that Dr. Borehardt had found at Negadah the tomb of Menes, celebrated as the creator of the canals. In that time metals were not in use, but many carved ivory fishes were found and carved stone legs for furniture. It is thought that fine stone carving reached its perfection at that period. The stone vases show a wonderful variety. The religion of the inhabitants of Egypt 5004 B. C., was Asiatic. Instead of preserving their dead, as the later Egyptians did, they showed a disposition to destroy them. Their bodies were twisted and, as in the case of Osiris, the heads were cut off. The king, being divine, was cremated. It must have taken many centuries for the race to reach such a comparatively high state of civilization, so that it is reasonable to place the humanized condition far back of seventy centuries ago."

One of the oldest and most remarkable aboriginal ruins in America is the famous Casa Grande, in the Gila Valley. This ruin has been made part of a government reservation to preserve it, and in 1892 Congress gave two thousand dollars to provide against further damage to the structure. It is situated nine miles west of Florence, Ariz., and a half mile from the Gila river. It appears to have been part of an immense group of buildings which covered nearly five acres.

Dr. Gustav Eisen, of the Academy of Sciences, San Francisco, Cal., claims to have discovered one of the turquoise beds from which the Mexican Aztecs secured a part of their supply. The beds are situated in a desert section at an elevation of about 3500 feet containing little vegetation and scarcely any animal life almost at the point where California, Nevada and Arizona join each other.

Some portions of the district show only turquoise veins, while a few miles away were found stones in the form of kidneys of various sizes from that of a pea to a large bean. The turquoises are generally found in what is known among miners as pockets and small seams—principally as pockets. They occur in considerable quantity, and a day's work results in finding a hatful of stones of varying value.

The other pits bear every evidence of having been worked by some ancient race, according to Professor Eisen's report. There are to be found in them fragments of Aztec pottery and prehistoric stone implements used in chipping the rock. The polished stones found are in the same shape as those in the possession of the Aztecs of Montezuma's time.

Wherever one of the old mines is found it is accompanied by picture writing on surrounding rocks. The hieroglyphics are found only on bluffs of basalt.

"They show," says Professor Eisen, "a mixture of distinct types. One of the rarest represents figures composed of simple lines, curves and dots, the figures resembling suns, stars, crosses, anchors and bars. With this group must be counted rough representations of animals and men. One picture represents a warrior with a large feathered cap standing on another warrior who has fallen.

"The most interesting form of hieroglyphic was of the shield type. Some of these were from three to four feet high and of the most complicated design. In Aztec picture writing there is nothing of a similar character, except coats of arms and shields, which stood for and indicated certain villages, cities or chiefs. But a closer resemblance is, strange to say, found in the hieroglyphics of the Mayas of Yucatan."

Dr. T. Miller, of Prescott, Ariz., a contributor to this journal, proposes to bequeath his fine archaeological collection, one of the most valuable in the state, to the Normal School at Tempe. The board of directors are willing to accept this magnificent donation, but find themselves short of the necessary funds to take proper care of it. They can console themselves with the knowledge that their institution is not the only one in this peculiar condition.

The W. W. Tooker archaeological collection which represents the aboriginal Indian tribes of Long Island, State of New York, was recently sold to the board of trustees of the Brooklyn Institute for three thousand dollars. Mr. Tooker is a well-known writer on aboriginal lore.

A Mr. William Niven has been doing some digging near Chilpancingo, Mexico. Before being allowed to excavate he was not only obliged to obtain a concession from the Mexican government, but had to gain the permission of the Indian owner of the land. The Indian owner permitted the ground to be upturned for one day, with the proviso that he received half of what was discovered.

Before a depth of six feet was reached the explorer was rewarded. A round, diorite dish was found in excellent condition. Then another layer of bones was discovered. A knitting needle, pearl ornament, jade beads and knives were among the trophies. The masterpiece, however, was a small statue. It is a kneeling figure of a king or priest. The hands are lifted in prayer. It is executed with great skill. The calm, proud face shows peaceful repose. The eyes suggest it is a portrait. The mantle draped over the shoulders is daintily graceful and shows the genius of the artist and the muscles of the torso and calves display his knowledge of anatomy.

The owner of the land was persuaded to sell his share and the valuable relics were preserved for people more appreciative. Nothing could better prove the early civilization of this country than this remarkably well preserved statue.

A lady writing to this magazine from Vancouver, B. C., says: "I lived many years among the 'Digger' Indians of California, and am interested (and amused) over the bickerings of some of your writers on this tribe. They not only dig for roots, but also for worms, ground mice and beetles. Grasshoppers I have seen them eat with a relish equal to mine for shrimps."

The history of ancient Egypt must be rewritten. The four mythical deities, Osiris, Horus, Set and Sais were living human beings, and reigned in the above country at least ten thousand years ago. A learned French Egyptologist discovered at Abydos the tombs of the above so-called deities, and I quote his description of the discovery below:

Everybody who has had a little education, or has read a little, knows, or at least has heard of, the legend of Osiris. The benevolent god, benignant and charming, to whom is generally attributed the progress of civilization in the Nile valley, who taught his contemporaries how to cultivate the earth, to enjoy the rural pleasures, to charm their leisure, and to forget their fatigues with the help of simple and touching songs, has been considered up to the present time more as a creation of the imagination than as a real, mortal being. But hereafter it will be difficult to doubt that Osiris, Isis, his sister-wife, and Horus, their son, lived in reality, and played at least partially the parts with which legends and traditions have credited them. The Egyptian texts speak very often of Osiris' tomb, which is designated under the name of "staircase of the great god." They add that the high officials that lived a short time after that epoch desired greatly to be buried near Osiris, who had preceded them in life and death. I discovered on the first of January of this year this famous staircase, which cannot leave any doubt as to the destination of the tomb which my excavations brought to light.

Two years ago I had already begun a very important work, if we consider only the number of cubic meters of sand removed, and my diggings on one side had stopped at a point three or four meters from a large tomb. During my previous excavations I had found a great number of traces of Osiris worship, but they could be explained by the general devotion that people of Abydos, as well as other parts of Egypt had for the god of the dead, who was also sometimes called "the Universal Lord," because men are all submitted to death's law. The hill under which was hidden Osiris' tomb is about one hundred and eighty meters in length by one hundred and sixty meters in width, and is here and there seven or eight meters high. It was composed of millions upon millions of small jars or earthen vases, also some large ones mixed up with sand and a few rare pieces of stone. From the first day of the excavations, in December last, pieces of pottery of all shapes, entire or broken, were found, bearing inscriptions written in hieroglyphic or hieratic signs. Large numbers of pieces mentioned the name of Osiris, and were due to the priests, while a number of smaller pieces bore the name of Amou-Ra. A few of these inscriptions mentioned the house of Osiris. Among Egyptians a term generally used to designate tombs was "eternal houses." These discoveries impressed me so strongly that as far back as December 2 I recorded in the diary, which I keep of my excavations, the belief that I was going to come across Osiris' tomb. If my discoveries had only related to a general worship I would not have found the double (Ka) name of King Menes among the debris; I would not have found that the worship of the dead buried under the hill had lasted until the end of the Egyptian empire. In spite of all these proofs, I lacked yet the details given in the Egyptian texts.

The tomb was in shape a large rectangle, and on the four sides of it were series of tombs which would number about two hundred. Moreover, the necropolis, known in the country under the name of Om-el-Gaab-el-Gharby, contained the sepulchers of persons of very high rank, among them kings, the steles of which I discovered two years ago. So this first point was settled. On January 1 appeared this fortunate staircase mentioned by the texts. The next day I discovered a unique monument. It was a granite monolith in the shape of a bed, decorated with the head and legs of a lion. On this bed was lying a mummy bearing what is known as the white crown, holding in his hands, which came out of the case, a flagellum and a pastoral cane. Near the head were two hawks, and two were at the feet. The dead was designated by the inscription: "Osiris the good Being." The hawks were labeled: "Horus, avenger of his father," and the goddess Isis is also designated by her name. This monument is one meter seventy in length, and about one meter in width and height. The tomb itself has the shape of a dwelling, with a courtyard in front. It contained fourteen rooms and the staircase, five rooms to the north, five to the south, and four to the east. The western face was open. The two extremities, south and north, were closed by a wall on the east side. The tomb was about thirteen meters in length, twelve meters in width, and two and a half meters in depth. There were evidences of fire in it. I found at the bottom of the rooms indisputable proof of the work of spoliators. This fact of the tomb having been destroyed by fire has rendered sterile a great part of my labor. This is to be lamented, and the case is hopeless, for what is lost is lost forever.

It was not without a deep emotion on my part that this holy sepulcher of Egypt was brought to light by my workmen, who did not even suspect the importance of the discovery. The emotion I felt at the thought that I was touching soil sacred for thousands of generations was rendered more intense when I considered that my discovery came just in time to prove that what have been called by theories and theses were not pure unsupported theories and sensational theses, but unquestionably realities proved by facts. Such are in a nutshell the main points of my discoveries.—M. E. Amelineau, in the Journal Egyptien.

A. F. B.